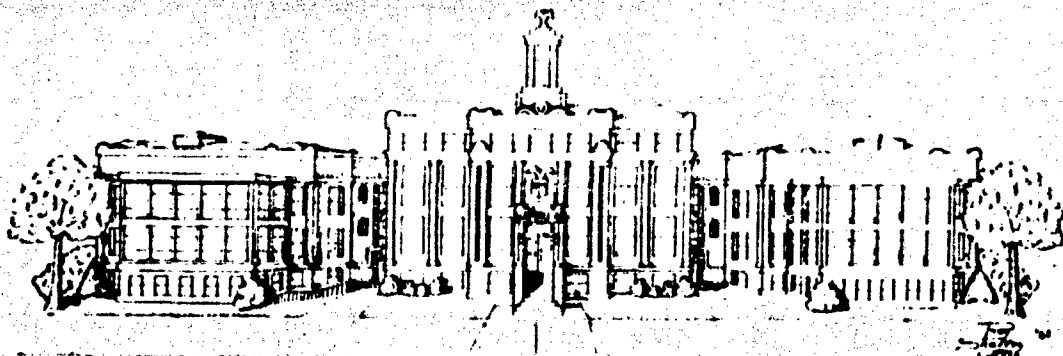


AD628170

NAVAL MEDICAL RESEARCH

UNIT No. 4

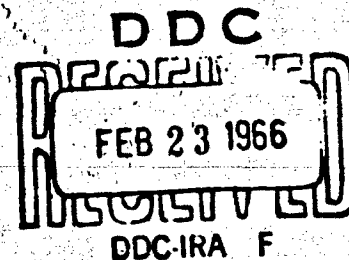


CYTOTOXICITY OF HUMAN SERA IN TISSUE CULTURE SYSTEMS

D. W. BENO, R. I. LYTTLE AND E. A. EDWARDS

code 1,20

4 PAT.



MR 005.12-7001..

June 1965

UNITED STATES
NAVAL MEDICAL
RESEARCH UNIT 4



UNITED STATES
NAVAL HOSPITAL
GREAT LAKES, ILL.

20050307010

Best Available Copy

BACTERIOLOGICAL PROCEEDINGS-1965

VI35. Cytotoxicity of human sera in tissue culture systems. D. W. Heno,* R. I. Lytle, and E. A. Edwards. U.S. Naval Hospital, Great Lakes, Ill.

While performing adenovirus neutralization tests in micro-titer plates, 148 (84%) of 176 heat-inactivated human sera exhibited cytotoxicity for HEp-2 cells at a 1:2 dilution. Titers ranged from 1:2 to 1:128 in "well" and ill individuals. Curtain electrophoretic analysis indicated that toxic factor moved with the prealbumin fraction. Presence in prealbumin was confirmed by Ouchterlony tests against prealbumin antisera and by disc electrophoresis methods. For further confirmation, 15 sera from three persons with varying levels of cytotoxicity for HeLa, HEp-2, KB, and WI38 cell lines were treated by ammonium sulfate precipitation, and two other highly toxic sera were submitted to curtain electrophoresis. The fractions were then tested for cytotoxicity in HeLa and HEp-2 cell lines. Toxicity was not demonstrated by any of the globulins that were separated from the 17 sera. It was concluded that the toxic substance was a prealbumin possibly associated with some physiological change in the human body.

0107000000000000

0107000000000000

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R&D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1 ORIGINATING ACTIVITY (Corporate author) Naval Medical Research Unit No. 4 U.S. Naval Hospital Great Lakes, Illinois 60088		2a REPORT SECURITY CLASSIFICATION Unclassified
		2b GROUP
3 REPORT TITLE CYTOTOXICITY OF HUMAN SERA IN TISSUE CULTURE SYSTEMS		
4 DESCRIPTIVE NOTES (Type of report and inclusive dates) Progress		
5 AUTHOR(S) (Last name, first name, initial) Beno, David W., Lytle, Ralph I., and Edwards, Earl A.		
6 REPORT DATE June 1965	7a TOTAL NO. OF PAGES 1	7b NO. OF REFS 0
8a CONTRACT OR GRANT NO. a. PROJECT NO. MR 005.12-1102.2 c. d.	9a ORIGINATOR'S REPORT NUMBER(S) MR 005.12-1102.2 9b OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
10 AVAILABILITY/LIMITATION NOTICES Unlimited distribution		
11 SUPPLEMENTARY NOTES	12 SPONSORING MILITARY ACTIVITY Bureau of Medicine and Surgery Navy Department Washington, D.C. 20390	
13 ABSTRACT While performing adenovirus neutralization tests in microtiter plates, 148 (84%) of 176 heat-inactivated sera exhibited cytotoxicity for H.Ep-2 cells at a 1:2 dilution. Titers ranged from 1:2 to 1:128 in "well" and "ill" individuals. Curtain electrophoretic analysis indicated that the toxic factor moved with the prealbumin fraction. Presence in the prealbumin was confirmed by Ouchterlony tests against prealbumin antisera and by disc electrophoresis methods. For further confirmation, 15 sera from 3 persons with varying levels of cytotoxicity for HeLa, H.Ep-2, KB, and WI38 cell lines were treated with ammonium sulfate precipitation, and two other highly toxic sera were submitted to curtain electrophoresis. The fractions were then tested for cytotoxicity in HeLa and H.Ep-2 cell lines. Toxicity was not demonstrated by any of the globulins that were separated from the 17 sera. It was concluded that the toxic substance was a prealbumin possibly associated with some physiological change in the human body.		

INSTRUCTIONS

14. KEY WORDS. Key words are usually meaningful terms, or short phrases that are used to identify and may be used as index entries for the document. Key words must be selected on the basis of the information required. Identifiers, such as author, title, organization, trade name, military project code number, etc., may not be used as key words but will be included in the listing of technical context. The assignment of key words and weights is optional.